ROMA MEDICAL

Model P001 – Wheelchair Powerpack

User Manual

Please ensure the manual is read and understood before installation and use

May 2015

CE

Intended Use

The unit is intended to be an aid to attendants or carers whilst pushing a wheelchair user. It is not designed as an accessory to enable a manual wheelchair perform as a power wheelchair.
Please take note of the information contained within this manual to ensure the unit is operated as intended and used within the design parameters.

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General Instructions and Information

- The powerpack complete with the battery weighs 29lbs (13.2kg). Please refer to the wheelchair handbook for the maximum user weight limits of the wheelchair.

- The powerpack is not to be used on wheelchairs where the user weight exceeds 136kg.

- Please read the instructions carefully before unpacking the powerpack or attempting installation.

- The powerpack and its associated components are relatively heavy and are installed at a low level. Care must be taken not to strain when lifting and assembling the powerpack during installation.

- Remove the powerpack from the packaging first, then the battery. Do not attempt to remove both items together as the battery may slip causing damage or personal injury.

- Always instal the powerpack to the wheelchair with the battery detached to avoid uneccessary strain. Likewise, remove the battery before detaching the powerpack from the wheelchair.

- Always ensure the on/off key or plug is in the 'off' position or removed before connecting or disconnecting the battery.

- Always ensure the power is switched off before the user enters or exits the wheelchair.

- Switch the power off if stationary for any period of time. If leaving the wheelchair unattended; occupied or otherwise, remove the key to prevent any unexpected movement.

- DO NOT operate the powerpack with an unoccupied wheelchair.

- The powerpack is simple to install and use. If you experience any difficulties, please contact the retailer from where it was purchased.

- The powerpack is not designed to climb steep gradients, nor to take the wheelchair anywhere where it would not be able to be normally pushed by an attendant.
  Negotiating down an incline can sometimes be more difficult than ascending the slope. Take care when descending slopes – the powerpack is not designed as a braking device and should not be used to hold a wheelchair stationary when on any incline. Whenever the wheelchair is left unattended the wheelchair brakes MUST be applied.

Installation

Fig 1. Powerpack Installation Components

1 – Drive unit assembly

2 – Battery Pack

3 – Crossbar

4 – Mounting Brackets

5 – Upper Controller and Mounting Bracket

6 – Battery Retaining Strap

Continued…..

Using a 5mm allen key fit the mounting brackets to each side of the lower sideframe. Ensure the clamp is fitted to the sideframe and NOT the lower section of the crossbar. The bracket should be fitted in front of the crossbrace with the release levers facing toward the rear of the chair as illustrated in figures 2 & 3.
It is very important to mount the brackets directly opposite each other to ensure the powerpack 'drives' in a straight line in relation to the wheelchair.

Fig 2.

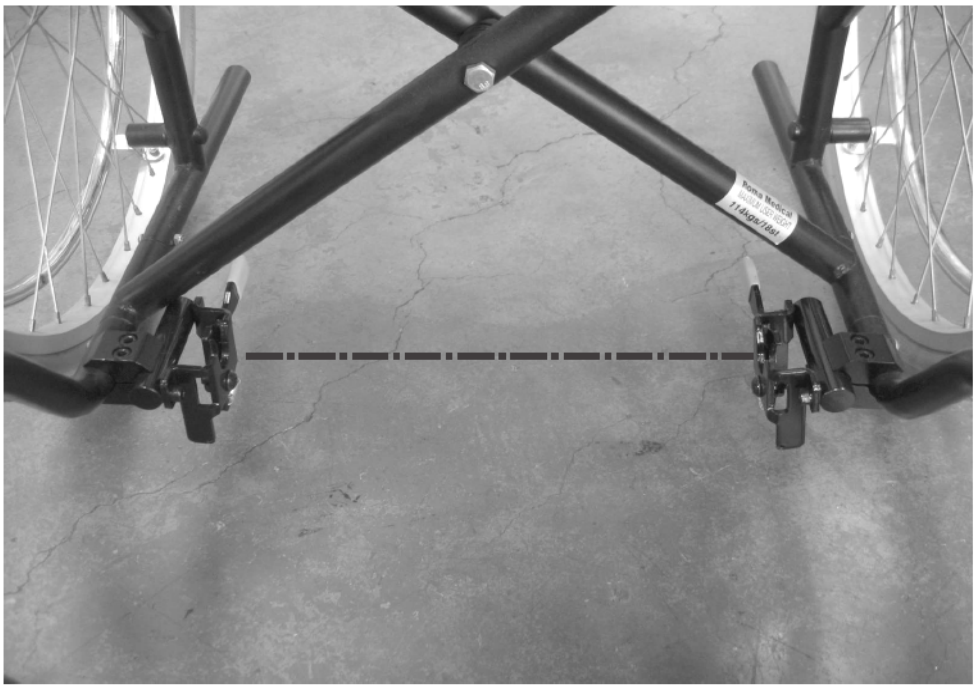

Fig 3.

Continued…..

Next, take the drive unit assembly and crossbar.
Remove the crossbar housing plate by undoing the four bolts. Place the large (outer) crossbar under the plate and refit. (DO NOT tighten any handknobs at this stage).
Insert the small (inner) crossbar as below (Figs 4 & 5).

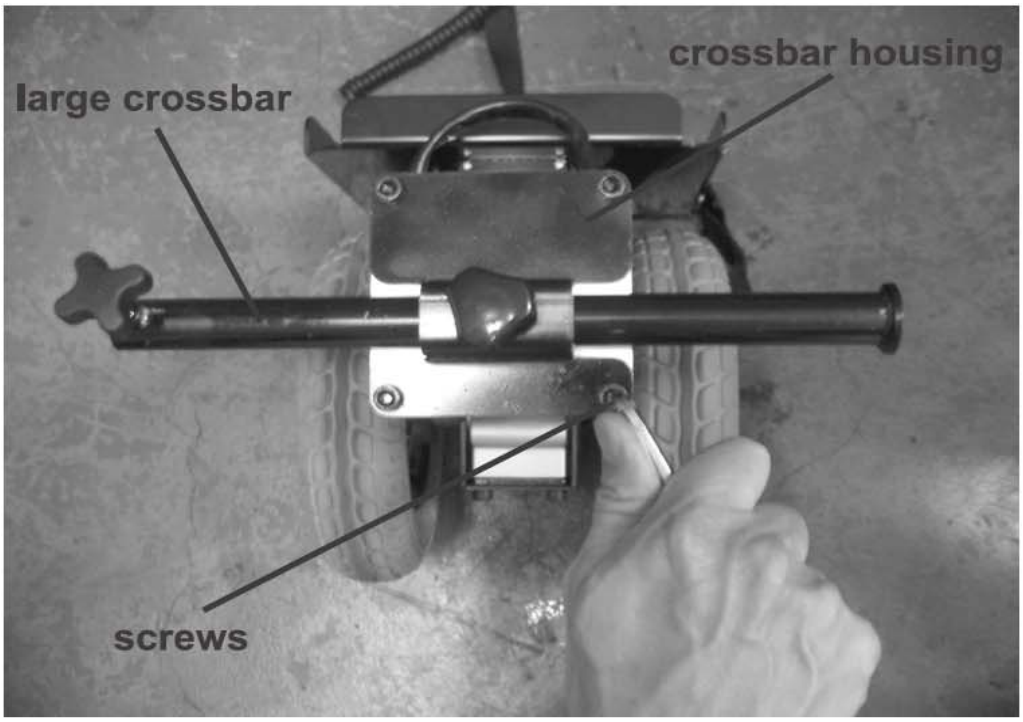

Fig 4.

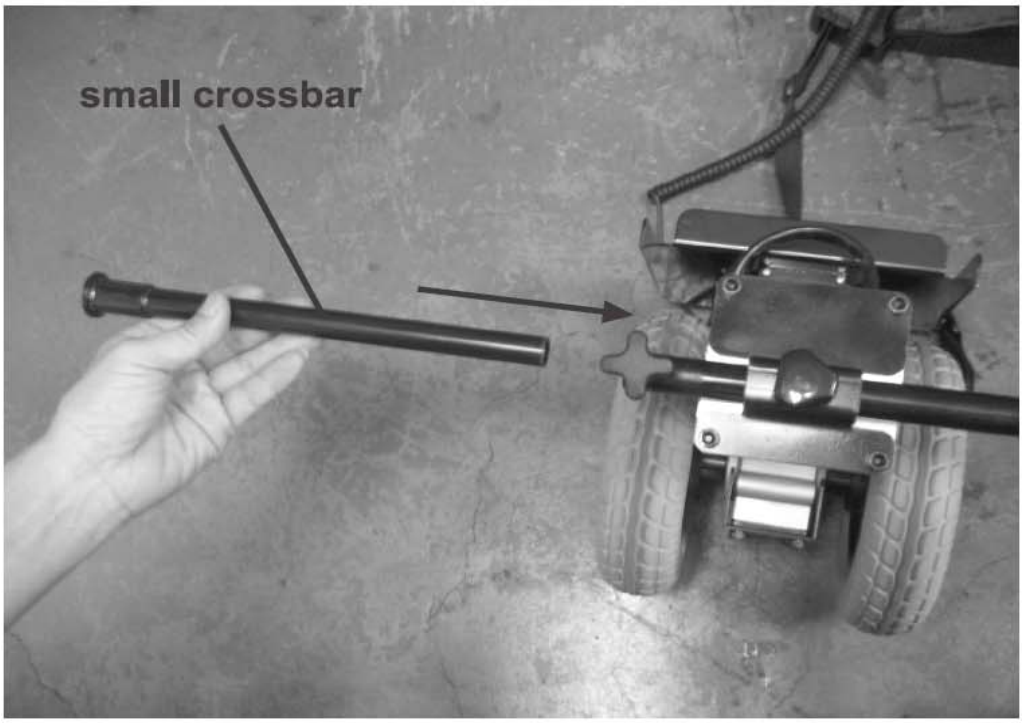

Fig 5.

Continued…..

As shown below, place the assembly under the wheelchair and locate each end of the crossbar in the mounting brackets. When you are confident that both sides are fully located, tighten the handknob as shown in fig.8.

Fig 6.

Fig 7.

Fig 8.

Centralise the unit under the wheelchair and tighten the centre handknob as below.

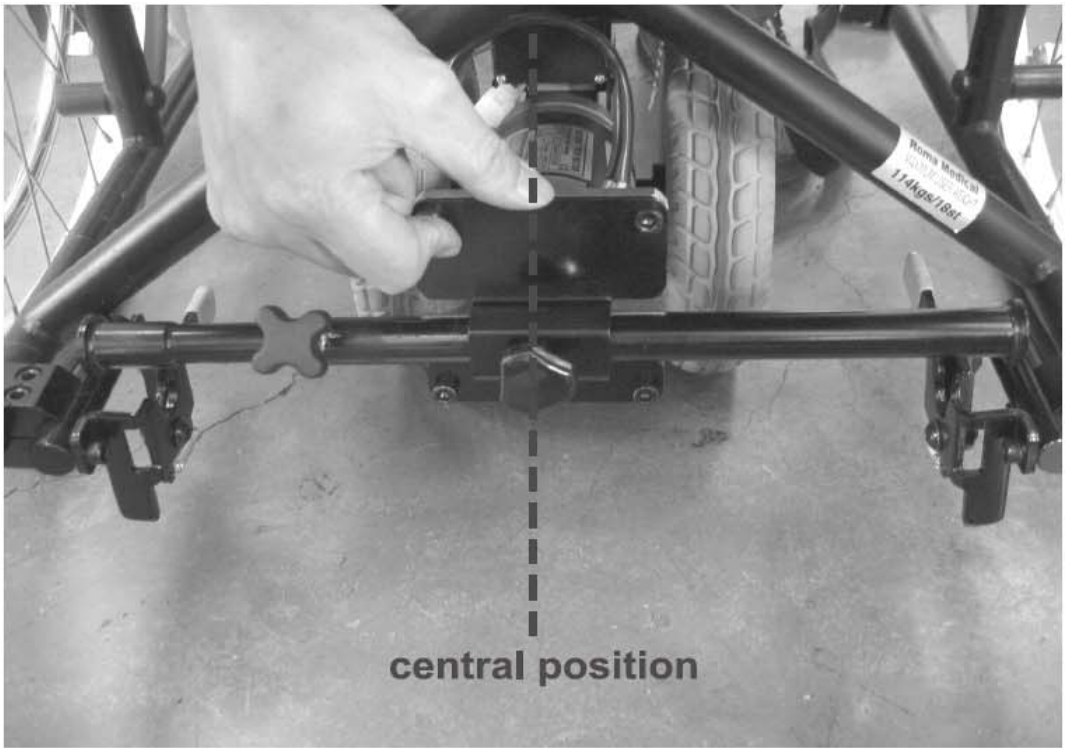

Fig 9.

Fig10.

Continued…..

Fit the upper controller to the handle. This should be positioned so that it is confortable to use but does not touch the backrest upholstery when the user sits back into the wheelchair.
Use the 3mm allen key to fix and adjust the angle of the controller as shown below.

Fig 11.

Fig 12.

Plce the battery pack on the tray and connect the cables as below.

Fig 13.

Fig 14.

Connect the spiral cable from the control box to the handset.

Fig 15.

Take the two holding straps and attach them to the rear of the frame as shown below. Note that anti-tippers will have to be removed to do this.

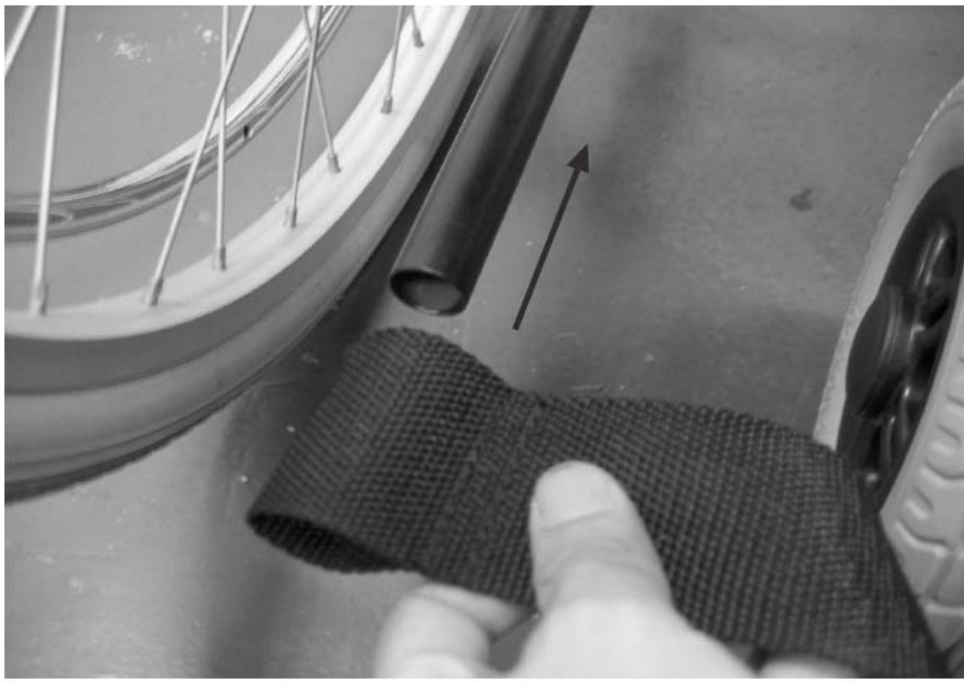

Fig 16.

Note – it may not be possible to fit the holding straps due to the nature of the wheelchair frame.

Fig 17.

Fig 18.

Technical Specifications

Model No.	P001
max. speed up to	5.5 kph / 3.4 mph
range up to	16 km / 10 ml
motor	DC 12 V / 75 W / 280 W
battery	12 V / 20 AH
charger	1.5 A off-board
drive wheel	8" PU tire x 2 pcs
capacity	136 kg / 300 lb
dimension	300 L x 200 W x 245 H
weight-base	6.4 kg / 14 lb
weight-battery	6.8 kg / 15 lb
weight-total	13.2 kg / 29 lb
fits wheelchair width	14 in ~ 20 in

Controls

P001A

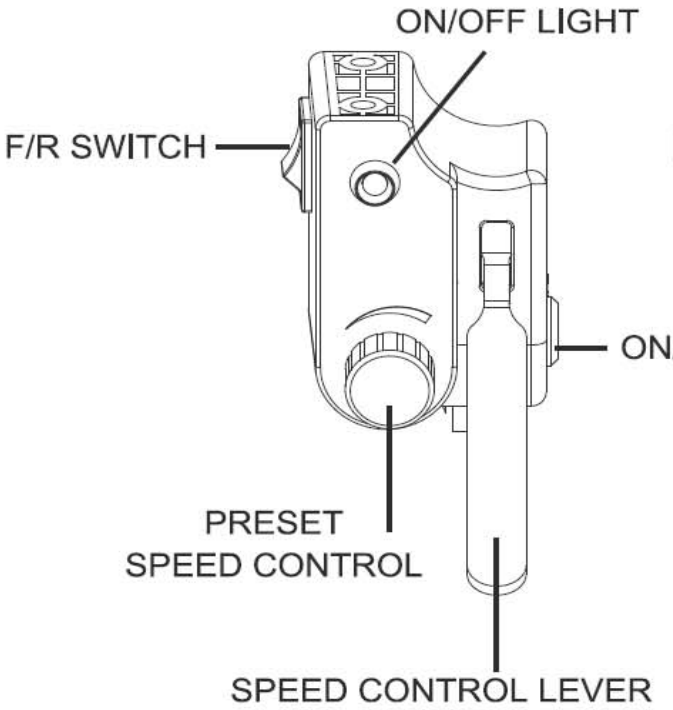

Fig 19. Handlebar Control

P001B

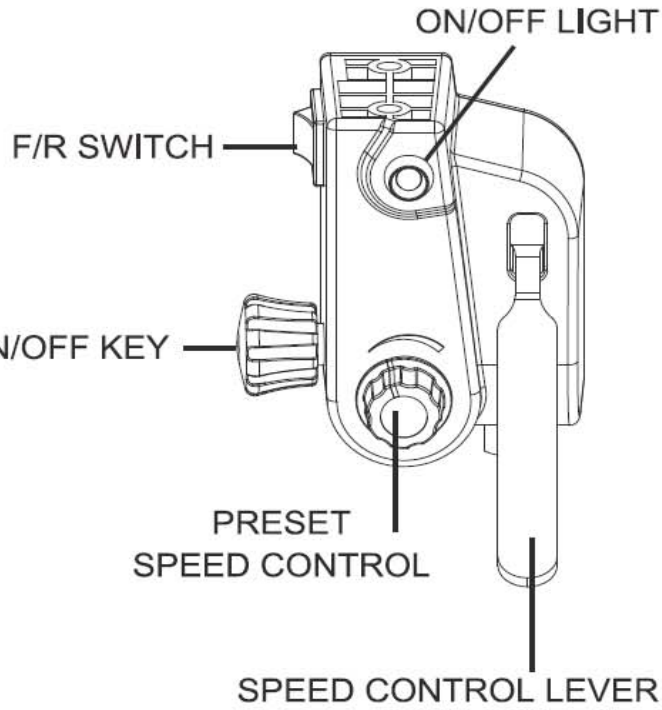

Fig 20. Handlebar Control

1. **ON/OFF Light -** This is a multi-function light that illuminates when the ON/OFF key is switched to the ON position indicating the machine is ready for use.
2. **PRESET SPEED CONTROL -** This controls the maximum speed of the Powerpack. Turn in a clockwise direction to increase speed and counterclockwise to reduce speed, This function is useful when navigating confined spaces where a high level of control is needed.
3. **SPEED CONTROL LEVER -** While the Preset Speed Control limits the top speed of the Powerpack, the speed control lever progressively controls the speed up to the preset limits. The more you pull the lever up with your hand the quicker you will go.
4. **ON/OFF KEY** - The key will be in a vertical position for OFF. Turn clockwise for ON. Never leave the key in the ON position when not in use or with someone sitting in the chair unattended. When leaving the chair always take the key with you.
5. **F/R SWITCH** - Switching the Powerpack to forward or backward.

Troubleshooting Guide

Should a fault occur, the on/off light will display a flash sequence which can be identified below:-

Flash code	Fault	Impact on controller	Note
1	Battery needs recharging	Will drive	Battery charge is running low. Recharge the battery as soon as possible.
2	Battery voltage too low	Drive inhibited	Battery charge is empty. Recharge the battery.
3	Battery voltage too high	Drive inhibited	Battery charge is too high Excessive charging can cause this fault.
4	Current limit time-out	Drive inhibited	The controller has drawn too much current for too long, possibly because the motor has been over-worked, jammed or stalled. Turn the controller power off, leave for a few minutes, and then turn the power back on again. The controller has detected a shorted motor. Check the loom for shorts and check the motor.
5	N/A	N/A	N/A
6	N/A	N/A	N/A
7	Throttle/Speed potentiometer error	Drive inhibited	The throttle, speed limit potentiometer or their wiring may be faulty. Check for open or short circuits. The throttle, speed limit potentiometer may not be correctly set up.
8	N/A	N/A	N/A
9	Internal error	Drive inhibited	Contact your service agent

Note – there are no user serviceable parts. Should a fault other than flash code 1 or 2 occur, please contact the retailer from where the unit was purchased for repair.

Operating your Powerpack

Your Powerpack uses one long-lasting, 12-volt batteries. These batteries are sealed, maintenance free, deep-cycle batteries. Since they are sealed, there is no need to check the electrolyte (fluid) level. Deep-cycle batteries are designed to handle a deep discharge. Though they are similar in appearance to automotive batteries, they are not interchangeable. Automotive batteries are not designed to handle a long, deep discharge, and are also unsafe for use in Powerpack.

WARNING! Battery posts, terminals and related accessories contain lead and lead compounds. Wash hands after handling.

IMPORTANT INFORMATION ABOUT BATTERIES

A fully charged deep-cycle battery provides reliable performance and extended battery life. Keep your batteries fully charged whenever possible. Batteries that are regularly discharged, infrequently charged, or stored without a full charge may be permanently damaged, causing unreliable operation and limited battery life.

If you do not use your Powerpack regularly, we recommend maintaining battery vitality by charging the batteries at least once a week.

Note: If you are storing a Powerpack for an extended period of time, you may wish to block the unit up off the ground with several boards under the frame. This keeps the tires off the ground to prevent the possibility of flat spots developing.

If you intend to use public transportation while using your Powerpack, you must contact in advance the transportation provider to determine their specific requirements.

Sealed Lead Acid and Gel Cell batteries are designed for application in wheelchairs and in other mobility vehicles. Generally, Sealed Lead Acid batteries that are marked as "Non-Spill" are safe for all forms of transportation such as aircraft, buses, and trains. We suggest that you contact your transportation provider to determine specific requirements of transportation and packaging.

Continued…..

Disconnect the battery back plug from the controller and connect the charger to the pack.
Plug the charger into a mains outlet and switch on.
The light on the charger will flash between green and red during the charging cycle. A solid (continuous) green light will indicate that the charge cycle is complete. You may now switch off the mains supply, unplug the charger from the pack and reconnect the battery.

Further Information

Surfaces

The unit operates at its best on textured surfaces such as tarmac. It is possible that use on polished or tiled floors (especially when wet) may not provide the friction between the wheels and drive surface to enable the powerpack to transfer its full driving ability.

General Use

The powerpack is not designed to be used on soft surfaces (sand etc.) or in long grass. Avoid driving the unit through puddles as this may damage the electronics. Do not leave the unit outside during rain showers – always store in a dry area.

Do not carry bags on the handles as this may interfere with the operation of the powerpack.

Warranty

This is to certify that your Roma Medical product is warranted for a period of 12 months from the date of original purchase. This warranty is not transferable.

Should a defect of operating fault arise within this period the retaoler from where the product was originally purchased should be contacted immediately. Failure to register the fault may invalidate the warranty.
The Retailer from where the product was purchased is responsible for any warranty repairs.

Roma Medical warrants that if a fault occurs within this period due to faulty workmanship or materials that the product will be repaired (or replaced at the Companys discretion) free of charge.

Any unauthorised modifications will invalidate the warranty.

Parts which are subjected to normal wear and tear, accidental damage, neglect or misuse are excluded from this warranty.

Model:

Serial No:

Purchase Date:

Dealer Stamp

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